







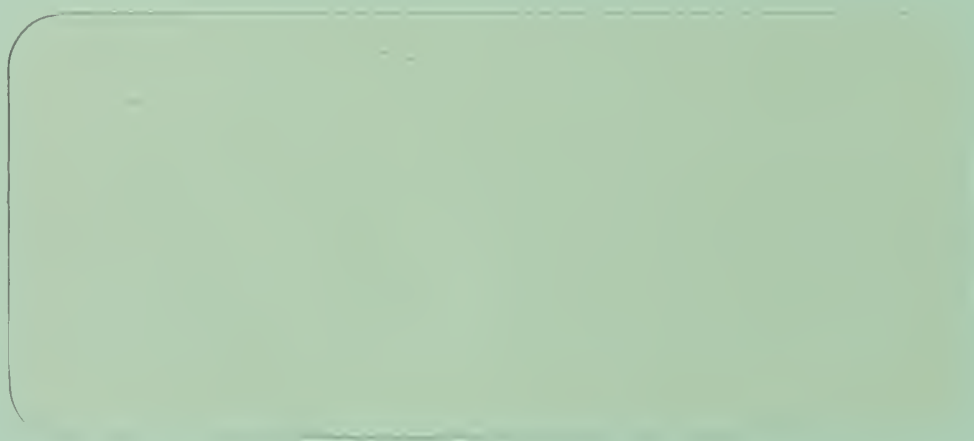
## **Faculty Working Papers**

**JOB CHARACTERISTICS AND INTERNAL  
MOTIVATION: THE MODERATING EFFECT OF  
INTERPERSONAL AND INDIVIDUAL VARIABLES**

**Greg R. Oldham**

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**College of Commerce and Business Administration  
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### ABSTRACT

This research examined: (a) the relationship between the internal work motivation of employees and their job performance; and (b) the moderating effect of individual growth need strength, co-worker satisfaction, and supervisory satisfaction on the relationships between several job characteristics and internal motivation. Results showed positive, significant relationships between the measure of internal motivation and employees' rated work quality, quantity and effort. In addition, significant relationships between the job characteristics and internal motivation were obtained for employees who were desirous of growth satisfactions and who experienced high satisfaction with their supervisor and co-workers. Implications of the results for future research on job design were discussed.

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Internal work motivation is quickly becoming an important and highly researched topic in the organizational behavior area (cf. Hackman & Lawler, 1971; Lawler, 1973; Hackman & Oldham, 1974a, 1974b, 1975). The reason for this is clear. Internal work motivation refers to the degree to which an individual experiences positive internal feelings when performing effectively on the job. Therefore, it follows that the concept should substantially relate to an employee's actual work performance. That is, an individual experiencing high internal motivation should perform at high levels since by doing so he is receiving many personally valued rewards.

Given the obvious importance of internal work motivation, it would be informative to specify the variables that enhance it and the circumstances in which these variables have their most substantial impact. Hackman & Lawler (1971) and more recently Hackman & Oldham (1974b) have demonstrated that the content of an individual's job is one of the critical determinants of his internal motivation level. Specifically, these authors suggest that the fundamental characteristics of jobs can establish conditions so that it is possible for workers to obtain personally rewarding experiences by doing well on their jobs. Thus, by improving or enriching the characteristics of jobs, levels of internal motivation should be increased in many situations as should individual work performance.

The characteristics of jobs predicted to enhance internal motivation and to be focused on in this study were most recently suggested by Hackman & Oldham (1975). Each is described briefly below.





1. Task significance: the extent to which the job has a substantial and perceivable impact upon others in the immediate organization or external environment.

2. Task identity: the extent to which the job requires completion of a "whole" and identifiable piece of work--doing a job from beginning to end with a visible outcome.

3. Skill variety: the extent to which the job requires the worker to perform different activities calling for different skills and abilities.

4. Autonomy: the extent to which the job gives the worker freedom, independence, and discretion in scheduling work and determining procedures.

5. Feedback: the extent to which the worker, in carrying out the activities required by the job, receives information about the effectiveness of his efforts.

As previously discussed, it should be possible to identify the conditions in which these job characteristics most substantially influence internal motivation. To begin with, previous research has demonstrated that individuals desirous of growth satisfactions in their work respond most positively to jobs high on the five characteristics (Hackman & Lawler, 1971; Wanous, 1974; Hackman & Oldham, 1974b). Thus, it is predicted that individuals desirous of growth satisfactions will experience high internal motivation on jobs high on the five job characteristics. Employees with weaker growth needs should experience little internal motivation on jobs high on the five characteristics. These relationships should occur since individuals desirous of growth satisfactions in their work are most likely to experience positive feelings from effective performance on jobs that are sufficiently complex to satisfy those growth needs.



The interpersonal satisfaction the focal employee experiences with significant others in the organization also might partially determine when the job characteristics will have their most substantial impact on internal motivation. Traditionally, researchers have assumed direct, positive associations between individuals' interpersonal satisfactions at work and their motivation and performance levels (cf. Seashore, 1954; Berkowitz, 1956). In large part, however, these findings have been contradictory. Some studies have shown a positive relationship between an individual's interpersonal satisfaction and work performance while others have shown no relationship or even a negative relationship (see Lott & Lott, 1965 for a review). A probable reason for these results is that interpersonal satisfaction has a moderating rather than an additive effect on work motivation and performance. That is, it may be that interpersonal satisfaction is not itself causal of employee work motivation, but rather its presence allows other independent variable - motivation relationships to flourish. In this sense, good interpersonal relations are necessary but not sufficient for high motivation.

In the context of the proposed association between the job and internal motivation, these arguments suggest that high interpersonal satisfaction permits the focal person to concentrate his attentions on the attributes of the job and, therefore, fully appreciate and respond to those attributes. Thus, if the employee is satisfied with his interpersonal relationships and his job is very complex, high internal motivation would be expected. On the other hand, dissatisfying interpersonal relations might disturb or distract the employee to such a degree that he is unable to fully attend and respond to the characteristics of a complex job.





Rather, the individual in this situation is likely to expend much energy and attention merely attempting to cope with or resolve his interpersonal difficulties.

Of the interpersonal relationships in the organization, certainly those with the employee's supervisor and co-workers must be considered particularly significant. It is therefore predicted that there will be substantial, positive correlations between the job characteristics and internal motivation for those employees highly satisfied with their immediate supervisor and co-workers. There should be relatively weak relationships between the job dimensions and internal motivation for those individuals dissatisfied with their co-workers and supervisor.

To summarize, two general hypotheses will be tested in this research.

They are:

- 1) The higher the level of internal motivation, the greater the employee's work effort, work quantity, work quality, and the lower his absenteeism.
- 2) The relationships between the job characteristics and internal motivation are moderated by the employee's desire for growth need satisfaction, his supervisory satisfaction, and his co-worker satisfaction.

### Method

#### Research Setting and Subjects

The research was conducted in the accounting division of large mid-western manufacturing organization, and focused on employees who worked on nine different jobs in the division. The jobs were clerical in nature and ranged from data card processors to secretaries.



Data were collected from 60 employees and 4 supervisors. All supervisors were male while the employees were about 50% males and 50% females.

### Instruments and Measures

Job characteristics. Employees described their jobs on several questionnaire scales relevant to the five job characteristics (i.e., task significance, task identity, skill variety, autonomy, feedback). The job descriptions involved three separate questionnaire items for each of the five dimensions. All items were rated on 7-point scales. A complete description of these items may be found in Hackman & Oldham (1974a).

Scores on all items describing each of the five job characteristics were averaged to arrive at a set of five summary scores. The Spearman-Brown reliabilities for the items making up each of the five characteristic scores ranged from .46 to .83. All reliabilities were considered adequate.

Relationships between the job characteristics ranged from .10 to .49 (median .28). While a few of the correlations were moderately strong, the five dimensions were sufficiently independent to warrant their retention as separate variables in the substantive analyses.

Additional assessments of the characteristics of employees' jobs were obtained from supervisors of the jobs. This was done to provide an indirect test of the "objectivity" of employee ratings. The ratings of each group (i.e., supervisors and employees) were averaged for each job, and then correlations were computed using jobs as observations. The median of the correlations between employees and supervisors was .50 --- indicating that there was substantial agreement between rater groups. These data, along with those provided by Hackman & Lawler (1971) and Hackman & Oldham (1974a),





suggest that employees were able to provide generally nondistorted descriptions of the characteristics of their jobs. Since it also might be argued that employees' perceptions of their jobs are causal of their reactions to them, employee ratings are used as the primary measures of the job characteristics in this study.

Moderating variables. Questions concerning the first proposed moderator, employees' desire for growth satisfactions, were included in the employee questionnaire. Respondents were asked to indicate the degree to which they would like several "growth-relevant" conditions (e.g., opportunities to learn new things, opportunities to be creative and imaginative) present in their work. Seven-point scales were again used. Scores on the six items measuring this moderator were averaged to form a "growth need" scale. The Spearman-Brown reliability was .90.

Supervisor satisfaction was measured with three items in the employee questionnaire. Employees were asked to indicate on 7-point scales how satisfied they were with the treatment they received from their immediate supervisor. The three items tapping this variable were averaged to form a supervisory satisfaction index. The Spearman-Brown reliability was .88.

The final proposed moderating variable, co-worker satisfaction, was also measured by three items in the employee questionnaire. The three items tapping the variable were averaged to form a co-worker satisfaction index. The Spearman-Brown reliability was a satisfactory .51.

The growth need index correlated .24 with co-worker satisfaction and -.08 with the supervisory satisfaction index. There was a .48 correlation



between supervisory and co-worker satisfaction. In total, correlations between these indices were sufficiently weak to warrant their retention as separate moderating variables.

Internal motivation. Items reflecting internal motivation were included in two sections of the employees' questionnaire. In one section employees were asked to indicate the amount of internal motivation they experienced in their work. In the other section they were asked to assess the amount of motivation they perceived others in their job as experiencing. A 7-point scale was used which ranged from "disagree strongly" to "agree strongly". The amount of internal motivation was assessed by six items developed by Hackman & Oldham (1974a): (a) I feel a great sense of personal satisfaction when I do this job well. (b) Doing this job well increases my opinion of myself. (c) I feel bad and unhappy when I discover that I have not done well on this job. (d) My own feelings are generally not affected much one way or the other by how well I do on this job (reverse scoring). (e) Most people on this job feel badly when they do poorly. (f) Most people on this job feel a great sense of personal satisfaction when they do well. Scores on the six items were averaged to yield a summary score reflecting internal motivation. The Spearman-Brown reliability of this index was .81.

Performance measures. Supervisors rated the performance of each of their employees on three dimensions: (1) the amount of effort the employee puts into his work; (2) the quantity of work done by the employee; and (3) the quality of the work done by the employee. Seven point scales were used to measure each of these variables. The median intercorrelation of these measures was .39.





Absenteeism measure. The number of days an employee was absent during the 12-month period immediately before the study was conducted was derived from company records. Extended leave of absence due to hospitalization were excluded from the analysis.

## Results

### Relationship Between Internal Motivation and Employee Performance

It was hypothesized that the more an individual was internally motivated, the greater would be his work effort, quality, quantity, and the lower his absenteeism. Relationships between the internal motivation index and performance indicators are presented in Table 1.

#### Insert Table 1 About Here

In general, the data provide substantial support for the hypothesis. Positive, significant relationships were obtained between the measure of internal motivation and the work quality, work quantity, and work effort measures. This suggests that the more the employee experiences positive internal feelings from performing effectively, the greater will be his rated work performance.

There was little relationship between internal motivation and absenteeism. The non-significant trend was in the predicted direction, however.

### The Moderating Effect of Growth Needs

It was predicted that the relationships between the five job characteristics and internal motivation were moderated by the employee's desire for growth need satisfaction. To begin to test this hypothesis, correlations between each of the job characteristics and internal motivation were computed



separately for those employees whose growth need scores were in the top one-third of the distribution for all subjects (mean=6.77) and for those employees whose scores were in the bottom one-third (mean=3.98). If the hypothesis is to receive support, correlations between the job characteristics and internal motivation should be positive and significant for employees in the high growth need group while the same relationships should approach zero in the low growth need group. In addition, the correlations for the high group should be substantially greater in magnitude than the correlations for the corresponding low group. Results are shown in Table 2.

Insert Table 2 About Here

In total, results tend to support the hypothesis. Correlations between each of the five job characteristics and internal motivation reached statistically significant levels for employees with high growth needs. However, for employees in the low growth need group, only two of the correlations between job characteristics and motivation were significant. With one exception, correlations in the high growth need group were greater in magnitude than those in the low group.

The Moderating Effect of Co-Worker and Supervisory Satisfaction

It was predicted that the relationships between the job characteristics and internal motivation were moderated by an employee's supervisory satisfaction and his co-worker satisfaction. To test these hypotheses, the sample was again split into thirds for each of the two moderators. The mean supervisory satisfaction scores for employees in high and low groups were 6.45 and 3.54 respectively. The mean co-worker satisfaction





scores were 6.18 and 4.06 for high and low groups respectively.

Correlations between the job characteristics and internal motivation were then computed separately for employees in the high and low groups for each moderator. Results are reported in Table 2.

Once again, the analyses give the hypotheses strong support.

Correlations between four of the job dimensions and internal motivation were significant for employees in the high co-worker satisfaction group and employees in the high supervisory satisfaction group. In addition, none of the correlations in either the low supervisory satisfaction or low co-worker satisfaction groups reached statistical significance. Finally, the correlations in the high supervisory satisfaction and high co-worker satisfaction groups were nearly all substantially greater in magnitude than those in the corresponding low groups.

### Discussion

The results of this study, in part, indicate that internal work motivation is an accurate predictor of an employee's performance. Specifically, it appears that the more internally motivated the individual (i.e., the more he experiences positive feelings from performing effectively), the greater quality and quantity of work he is likely to produce as well as the more effort he is likely to exert in his job.

The measure of internal motivation did not predict very well the number of days the employee was absent. This may have been due to the way in which absenteeism was measured. The number of days rather than the number of occasions each employee was absent was tabulated. Unfortunately,



"occasions" data were not available from the organization. This may have confounded the results somewhat since single long absence periods were included in the data.

A more likely reason for the negligible internal motivation - absenteeism result has to do with the conceptual nature of internal motivation. It appears as though internal motivation plays a significant role in individuals' work performance after a job is begun (i.e., employees work harder on a job and produce better work when they are highly internally motivated). However, this force might be quite distinct from that which brings employees to the job every day. In fact, the decision to go to work would seem to depend more on the differences the employee perceives in the number and type of rewards which result from attending the work organization versus other organizations or activities than the number of positive feelings the employee experiences from effective work performance. Clearly, more research is needed in this area before any definite conclusion can be drawn.

In addition, more work is needed to examine the relationships between internal motivation and other outcome variables such as turnover and accidents. Also, a test of the impact of internal motivation on objective measures of performance (rather than ratings) would seem to supplement the results reported in this paper.

The results of the present research also show that individuals perceiving their jobs as high on the five job characteristics (i.e., autonomy, skill variety, feedback, task significance, task identity) experience high internal motivation when they are well satisfied with





their supervisor and co-workers and when they are desirous of growth need satisfactions. When these satisfactions are low, however, the job characteristics seem to lead less directly to high internal motivation.

The results establishing growth need strength as a moderator of the job-internal motivation relationship support earlier research in this area (e.g., Hackman & Lawler, 1971; Hackman & Oldham, 1974b). These data indicate that certain job characteristics and certain individual difference variables interact in determining employee motivation. Apparently individuals desirous of growth need satisfactions will, when working on jobs high on the job characteristics, perceive that valued rewards can be obtained by working effectively.

The implications of this finding for practitioners are obviously significant. Briefly, it suggests that individual work motivation and performance might be improved substantially if the employee is appropriately matched to his job. Thus, before any selection or job redesign program is undertaken, it is essential to consider the employee's need state as well as the characteristics of the job into which he is to be placed. To maximize effectiveness, then, employees desirous of growth need satisfactions should be placed in the most complex jobs or in jobs that are to be enriched. In these situations, the appropriate individual-job match is achieved and the employee is most likely to thrive and be highly internally motivated.

This study also showed that the relationships between the job characteristics and internal motivation are moderated by the interpersonal conditions of supervisory and co-worker satisfaction. These results suggest that when interpersonal satisfactions are high, the employee is



better able to attend to and concentrate on the job itself. Essentially, then, when the employee is satisfied with his co-workers and supervisor, no interpersonal barrier exists between the job and the employee's motivational state. When low interpersonal satisfactions are present, however, the individual is likely to devote his attention to those matters and not to the job--resulting in a less than full appreciation of the task characteristics..

Again, the implications of these findings are substantial. They suggest that practitioners should analyze the interpersonal conditions in the organization (in addition to employees' need states) prior to and after making substantive changes in jobs. Then, if poor interpersonal relationships are detected, job enrichment change agents should consider actions to improve the interpersonal skills and competence of those employees whose jobs are to be changed as well as the individuals they are most likely to interact with. Improving levels of interpersonal competence (perhaps by experiential learning techniques) should help employees deal more effectively with interpersonal conflicts and reap more satisfactions out of their work relationships (Argyris, 1962).

Besides supporting studies mentioning the important role of interpersonal relations in job design (cf. Alderfer, 1967; Lawler, Hackman & Kaufman, 1973), results of this research also give indirect support to portions of Herzberg's (1966) two-factor theory of job satisfaction. Herzberg insists that an individual will be satisfied when "motivators" are present in the work and he is able to avoid poor hygienic conditions (e.g., poor interpersonal relations). Although Herzberg does not define specific job





characteristics, considers "hygiene" factors as variables of secondary importance, and deals primarily with the dichotomy of job satisfaction - job dissatisfaction rather than internal motivation, he remains one of the first to recognize the importance of a type of job - interpersonal relations interaction. This study supports the existence of such an interaction.

Further research is needed to examine the moderating effect of other attributes of the work environment on the job characteristic - internal motivation relationship. Specifically, such potential moderators as the organization's climate, the structure of the organization, and the pay and feedback systems in the organization might be focused on.

It would also be interesting to examine the direct relationship between the above variables and internal motivation. Ultimately, they might serve as conditions organizations could improve to better individual motivation and performance.



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### Footnotes

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TABLE 1

Relationships Between Internal Motivation  
and Employee Performance

| <u>Performance Indicator</u> |                 |                  |                |             |
|------------------------------|-----------------|------------------|----------------|-------------|
|                              | Work<br>Quality | Work<br>Quantity | Work<br>Effort | Absenteeism |
| Internal<br>Motivation       | .25*            | .22*             | .22*           | -.07        |

NOTE. N = 60

\* $p < .05$  (one-tailed test)





TABLE 2

The Effect of Each Moderator on the Job Characteristic -  
Internal Motivation Relationship

| Job<br>Characteristic | Growth Needs     |                  |      | Co-Worker Satisfaction |      |                  | Supervisory Satisfaction |      |                  |
|-----------------------|------------------|------------------|------|------------------------|------|------------------|--------------------------|------|------------------|
|                       | High             | Low              | Diff | High                   | Low  | Diff             | High                     | Low  | Diff             |
| Autonomy              | .58**            | .26              | .32  | .66**                  | .17  | .49*             | .48**                    | .01  | .47 <sup>a</sup> |
| Task<br>Significance  | .29 <sup>a</sup> | .11              | .18  | .46*                   | .06  | .40 <sup>a</sup> | .57**                    | -.17 | .40 <sup>a</sup> |
| Skill<br>Variety      | .53**            | .49**            | .04  | .51**                  | .27  | .24              | .42*                     | .26  | .16              |
| Feedback              | .29 <sup>a</sup> | .34 <sup>a</sup> | -.05 | .36*                   | .20  | .16              | .31 <sup>a</sup>         | .22  | .09              |
| Task<br>Identity      | .39*             | .14              | .25  | .16                    | -.06 | .10              | .19                      | .19  | .00              |

NOTE. N = 20-22 in each group

\*\*p < .01 (one-tailed test)

\*p < .05

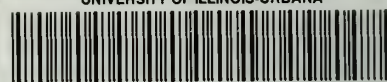
<sup>a</sup>n = .10







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